

TABLE OF CONTENTS

EXECUTIVE SUMMARY	ES-1
1.0 INTRODUCTION.....	1-1
1.1 Overview of the Proposed Project	1-4
1.2 Purpose and Need	1-5
1.3 Presidential Permit Review Process (New Section)	1-6
1.4 Overview of Crude Oil Market (New Section).....	1-6
1.4.1 Supply of Heavy Crude Oil from the WCSB	1-8
1.4.2 Demand for Heavy Crude Oil in PADD III	1-10
1.4.3 Transport of Crude Oil from the WCSB to PADDs II and III	1-11
1.5 Agency Participation	1-12
1.6 Indian Tribe Consultation.....	1-12
1.7 SHPO Consultation	1-12
1.8 Environmental Review of the Canadian Portion of the Keystone XL Project	1-12
1.9 Preparation and Review of the EIS.....	1-12
1.9.1 Scoping for the Draft EIS.....	1-12
1.9.2 Draft EIS Review Process.....	1-13
1.9.3 Preparation and Review of the Supplemental Draft EIS	1-13
1.10 Permits, Approvals, and Regulatory Requirements.....	1-14
1.11 References	1-14
2.0 PROJECT DESCRIPTION.....	2-1
2.1 Overview of the Proposed Project	2-1
2.2 Aboveground Facilities.....	2-3
2.2.1 Pump Stations.....	2-3
2.2.2 Mainline Valves	2-3
2.2.3 Pigging Facilities.....	2-4
2.2.4 Densitometer Facilities.....	2-4
2.2.5 Delivery Sites	2-4
2.2.6 Cushing Tank Farm.....	2-4
2.2.7 Ancillary Facilities	2-5
2.2.7.1 Additional Temporary Workspace Areas	2-5
2.2.7.2 Pipe Storage Sites, Railroad Sidings, and Contractor Yards	2-5
2.2.7.3 Fuel Transfer Stations.....	2-5
2.2.7.4 Construction Camps	2-5
Design of Camps	2-5
Use of Camps	2-7
Decommissioning of Camps.....	2-7
2.2.7.5 Access Roads.....	2-8
Roadway Maintenance, Repair, and Safety	2-8
2.3 Pipeline System Design and Construction Procedures	2-9
2.3.1 Pipeline Design Parameters.....	2-9
2.3.2 Planned Pipeline Construction Procedures.....	2-13
2.3.2.4 Pipe Stringing, Bending, and Welding	2-13
2.3.2.5 Installing and Backfilling	2-13
2.3.2.6 Hydrostatic Testing	2-13
2.3.2.7 Pipe Geometry Inspection, Final Tie-ins, and Commissioning	2-14
2.3.2.8 Cleanup and Restoration.....	2-14
2.3.2.9 Post-Construction Reclamation Monitoring and Response	2-14
2.3.3 Special Construction Procedures.....	2-15
2.3.4 Aboveground and Ancillary Facilities Construction Procedures	2-15
2.3.4.3 Mainline Valves, Pigging and Densitometer Facilities, and Delivery Sites	2-15

TABLE OF CONTENTS (CONTINUED)

2.3.5	Construction Schedule, Workforce and Environmental Inspection	2-15
2.4	Operations and Maintenance	2-15
2.4.1	Normal Operations and Routine Maintenance	2-16
2.4.2	Abnormal Operations	2-16
2.4.2.1	SCADA and Leak Detection	2-16
2.4.2.2	Emergency Response Procedures	2-16
2.4.2.3	Remediation.....	2-19
2.4.3	Operations and Maintenance Conditions Imposed by PHMSA	2-19
2.5	Connected Actions.....	2-19
2.5.1	Electrical Substations and Power Distribution Lines (New Title)	2-20
2.5.2	Big Bend to Witten 230-kV Transmission Line (New Title)	2-20
2.5.3	Bakken Marketlink Project.....	2-20
2.5.4	Cushing Marketlink Project	2-21
2.6	Future Plans and Project Decommissioning	2-21
2.6.1	Future Plans.....	2-21
2.6.1.1	Proposed Project.....	2-22
2.6.1.2	Other Related Facilities (New Section)	2-22
2.6.2	Decommissioning of the Proposed Project (New Title).....	2-22
2.6.2.1	Project Life	2-22
2.6.2.2	Decommissioning	2-22
3.0	ENVIRONMENTAL ANALYSIS	3-1
3.1	Geology	3-1
3.2	Soils and Sediments.....	3-1
3.2.1	Sand Hills Topographic Region Existing Conditions	3-1
3.2.2	Potential Impacts of Construction to the Sand Hills Topographic Region	3-3
3.2.3	Connected Actions	3-3
3.2.4	References	3-3
3.3	Water Resources	3-5
3.3.1	Environmental Setting.....	3-5
3.3.1.1	Groundwater	3-5
	Water Quality	3-5
	Aquifers and Depth to Groundwater	3-6
	Montana.....	3-11
	South Dakota.....	3-12
	Nebraska.....	3-13
	Kansas	3-16
	Oklahoma	3-16
	Texas	3-17
3.3.2	Potential Impacts and Mitigation	3-18
3.3.3	Connected Actions	3-18
3.3.4	References	3-18
3.4	Wetlands	3-21
3.5	Terrestrial Vegetation.....	3-21
3.6	Wildlife.....	3-21
3.7	Fisheries.....	3-21
3.8	Threatened and Endangeres Species and Species of Conservation Concern.....	3-21
3.9	Land Use, Recreation, and Visual Resources	3-21
3.10	Socioeconomics	3-22
3.10.1	Socioeconomics and Environmental Justice (New Title).....	3-22
3.10.1.1	Environmental Setting (New Title).....	3-22
	Population	3-22

TABLE OF CONTENTS (CONTINUED)

Housing.....	3-22
Economic Activity	3-22
Tax Revenue	3-22
Public Services	3-23
Environmental Justice.....	3-23
Methodology to Identify and Locate Minority and Low-Income Populations.....	3-23
Minority Populations.....	3-37
Low-Income Populations	3-41
3.10.1.2 Potential Impacts.....	3-54
Construction Impacts	3-54
Environmental Justice	3-54
Operations Impacts.....	3-74
3.10.2 Public Services, Tax Revenues, and Property Values.....	3-74
3.10.3 Traffic and Transportation	3-74
3.10.4 Connected Actions	3-74
3.10.5 References	3-74
3.11 Cultural Resources.....	3-79
3.12 Air Quality and Noise.....	3-79
3.12.1 Air Quality	3-79
3.12.1.1 Environmental Setting.....	3-79
3.12.1.2 Regulatory Requirements.....	3-79
Greenhouse Gas Regulatory Requirements	3-79
3.12.1.3 Potential Impacts and Mitigation	3-80
3.12.1.4 Connected Actions	3-80
3.12.2 Noise	3-81
3.13 Potential Releases from Project Construction and Operation and Environmental Consequences Analysis	3-81
3.13.1 Pipeline Safety Considerations.....	3-81
3.13.1.1 Pipeline Safety Standards and Regulations	3-81
U.S. Department of Transportation Regulations	3-81
PHMSA Special Conditions	3-84
Standards and Regulations for Affected States	3-85
Industry Standards	3-85
Summary.....	3-86
3.13.1.2 U.S. Pipeline Spill Incident History	3-87
PHMSA Pipeline Incident Statistics	3-87
TransCanada and Keystone Operating History	3-91
3.13.2 Spill Volume Categories and Potential Types of Releases	3-93
3.13.2.1 Spill Volume Categories	3-93
Very Small and Small Spills.....	3-93
Substantive and Large Spills	3-93
Very Large Spills.....	3-93
3.13.2.2 Potential Types of Releases	3-94
Refined Oil Products	3-94
Hazardous Materials	3-94
Crude Oil	3-94
3.13.3 Potential Releases during Project Construction	3-94
3.13.4 Potential Spills from Project Operations (Including Maintenance)	3-95
3.13.4.1 Operational Spills.....	3-95
3.13.4.2 Operational Spills Risk Assessments	3-96
Oil Spill Frequency.....	3-96

TABLE OF CONTENTS (CONTINUED)

Significant Incident Frequency Projections	3-96
Incident Frequency Determined by Specific Causative Mechanisms	3-97
Results Comparison	3-98
Oil Spill Volume.....	3-98
Historical Spill Volumes	3-98
Maximum Spill Volumes	3-99
3.13.5 Impacts Related to Oil Spills.....	3-101
3.13.5.1 Physical, Temporal, and Environmental Factors Affecting Hazardous Liquid Spill Impacts	3-103
Location of Spill	3-103
Type of Material Released.....	3-104
Comparison of WCSB Heavy Crude Oils with Other Heavy Crude Oils Currently Refined in PADD III	3-111
Comparison of WCSB Conventional and Oil Sands Derived Crude Oils.....	3-117
Habitat, Natural Resources, and Human Use Receptors	3-119
Season.....	3-120
Spring-Fall.....	3-120
Winter.....	3-120
Freeze-up and Breakup in Aquatic Environments	3-120
Weather and Water Levels	3-120
3.13.5.2 Keystone Response Time and Actions.....	3-121
3.13.5.3 Factors Affecting the Behavior and Fate of Spilled Oil.....	3-122
Spreading.....	3-123
Adsorption	3-123
Evaporation.....	3-123
Dispersion.....	3-123
Dissolution.....	3-124
Emulsification.....	3-124
Photo-degradation.....	3-124
Biodegradation	3-125
3.13.5.4 Summary of Environmental Factors Affecting the Fate of Spilled Oil.....	3-125
3.13.5.5 Actions to Prevent, Detect, and Mitigate Oil Spills	3-125
Oil Spill Prevention	3-125
Oil Spill Detection	3-127
Oil Spill Response Procedures	3-128
Response Time	3-129
Spill Response Equipment.....	3-129
Spill Response Personnel and Training	3-130
Locations of Spill Responders.....	3-130
Spill Training Exercises and Drills.....	3-131
Mitigation and Liability	3-131
Mitigation	3-131
Liability	3-131
3.13.5.6 Types of Oil Spill Impacts	3-132
Physical Impacts	3-132
Potential for Explosion and Fire.....	3-133
Chemical and Toxicological Impacts	3-133
Biological (Ecological) Impacts	3-137
Assessment of Impact Magnitude.....	3-138
3.13.6 Resource-Specific Impacts.....	3-140
3.13.6.1 Geology	3-140

TABLE OF CONTENTS (CONTINUED)

Paleontological Resources	3-140
Mineral and Fossil Fuel Resources	3-140
3.13.6.2 Soils and Sediments	3-141
Soils	3-141
Sediments	3-141
3.13.6.3 Water Resources.....	3-141
Surface Water	3-141
Groundwater	3-143
Subsurface Crude Oil Migration and Groundwater Flow	3-143
Response Time, Source Control, Cleanup and Remediation	3-145
Wetlands	3-146
3.13.6.4 Biological Resources.....	3-147
Vegetation.....	3-147
Birds	3-147
Mammals	3-149
Fish and Other Aquatic Species.....	3-149
Sensitive, Threatened and Endangered Species.....	3-151
3.13.6.5 Land Use, Recreation and Special Interest Areas, and Visual Resources.....	3-152
3.13.6.6 Cultural Resources	3-152
3.13.6.7 Socioeconomics.....	3-153
Environmental Justice Considerations.....	3-154
3.13.6.8 Air Quality	3-155
3.13.7 References	3-155
3.14 Cumulative Impacts	3-163
3.14.1 Methods	3-163
3.14.2 Past, Present, and Reasonably Foreseeable Projects	3-163
3.14.2.1 Cumulative Impacts from Oil Storage and Transportation Systems	3-168
Future (Proposed or Announced) Oil Storage and Transportation Systems	3-168
Connected Actions to the Proposed Project	3-168
Other Projects.....	3-169
3.14.3 Cumulative Impacts by Resource	3-169
3.14.3.8 Threatened and Endangered Species	3-169
3.14.3.9 Noise	3-171
3.14.3.12 Socioeconomics.....	3-171
Environmental Justice Considerations.....	3-172
3.14.3.13 Cultural Resources	3-173
3.14.3.14 Air Quality	3-173
Refineries.....	3-173
PADD II Refineries	3-173
PADD III Refineries	3-174
Future Projections of Refinery Crude Oil Slates, Expansions and Investments in PADD III	3-177
End Use	3-183
Greenhouse Gases and Climate Change	3-183
Regulations and Standards Relating to Greenhouse Gases	3-184
Cumulative Effects of GHG.....	3-187
Indirect Cumulative Impacts and Life Cycle Greenhouse Gas Emissions	3-188
Climate Change	3-199
3.14.4 Extraterritorial Concerns	3-200
3.14.4.1 Canadian National Energy Board Environmental Analysis of the Keystone XL Project	3-201

TABLE OF CONTENTS (CONTINUED)

3.14.4.2	Influence of the Proposed Project on Oil Sands Development in Canada	3-202
3.14.4.3	Environmental Effects of Oil Sands Development in Alberta	3-202
3.14.4.4	Protections for Shared Migratory Bird and Threatened and Endangered Species Resources	3-204
3.14.5	Summary of Cumulative Impacts.....	3-206
3.14.6	References	3-206
3.15	Potential Impacts of the Bakken Marketlink and Cushing Marketlink Projects.....	3-209
3.15.1	References	3-210
4.0	ALTERNATIVES	4-1
4.1	No Action Alternative	4-2
4.1.1	PADD III Crude Oil Demand and Supply with the No Action Alternative	4-9
4.1.2	WCSB Crude Oil Production and World Market Access under the No Action Alternative.....	4-10
4.1.2.1	WCSB Crude Oil Production and Existing Export Capacity	4-10
4.1.2.2	WCSB Crude Oil Potential Access to World Markets	4-11
	Northern Gateway Pipeline	4-12
	Kinder Morgan Trans Mountain Pipeline Projects.....	4-12
	Other Potential Projects	4-13
4.1.2.3	Likely Future Impacts under the No Action Alternative	4-13
4.1.3	Use of Alternative Energy Sources and Energy Conservation.....	4-14
4.1.3.1	Use of Alternative Fuel and Energy Conservation in Transportation	4-15
4.1.3.2	Use of Alternative Energy Sources and Conservation in Place of Distillate Fuel Oil for Non-Transportation-Related Uses	4-18
4.1.3.3	Use of Alternative Energy Sources in Place of Residual Fuel Oil for Non-Transportation-Related Uses.....	4-19
4.1.3.4	Use of Alternative Energy Sources in Place of Other Non-Transportation-Related Refined Products	4-19
4.1.4	Summary	4-20
4.2	System Alternatives	4-21
4.2.1	Use of Existing or Expanded Pipeline Systems	4-21
4.2.1.1	ExxonMobil Pegasus Pipeline	4-22
4.2.1.2	Express-Platte Pipeline System	4-22
4.2.1.3	Keystone Oil Pipeline Project.....	4-23
4.2.1.4	Alberta Clipper Pipeline Project.....	4-23
4.2.2	Use of Other Proposed or Planned Pipeline Systems	4-24
4.2.2.1	Altex Pipeline System	4-24
4.2.2.2	Chinook-Maple Leaf Pipeline System.....	4-25
4.2.2.3	Texas Access Pipeline	4-25
4.2.2.4	Enbridge Trailbreaker Project	4-26
4.2.2.5	Enbridge-BP Delivery System.....	4-26
4.2.2.6	Enbridge Monarch Pipeline	4-26
4.2.2.7	Seaway Pipeline.....	4-27
4.2.3	Alternative Modes of Transportation	4-27
4.2.3.1	Truck Transport.....	4-27
4.2.3.2	Railroad Tank Car Transport.....	4-28
4.2.3.3	Barge and Marine Tanker Transport	4-30
4.3	Major Route Alternatives and Route Variations	4-31
4.3.1	Introduction	4-31
4.3.2	Approach	4-31
4.3.2.1	Screening Criteria	4-31
	Control Points Criterion.....	4-31

TABLE OF CONTENTS (CONTINUED)

Avoidance Criterion	4-32
Length of Alternative Routes Criterion	4-34
Distance Parallel to Existing Linear ROW Criterion	4-34
4.3.2.2 Identification of Route Alternatives	4-35
4.3.3 Alternative Routes for the Steele City Segment.....	4-35
4.3.3.1 Express-Platte Alternatives.....	4-35
4.3.3.2 Steele City Segment Alternative A (SCS-A).....	4-39
4.3.3.3 Steele City Segment Alternative A1A.....	4-40
4.3.3.4 Keystone Corridor Alternative	4-41
4.3.3.5 I-90 Corridor Alternatives A and B	4-44
4.3.3.6 Baker Alternative.....	4-51
4.3.4 Western Alternative (Alternative to Both Steele City Segment and the Cushing Extension)	4-52
4.3.5 Gulf Coast Segment Alternative Routes	4-53
4.3.6 Houston Lateral Alternative Routes.....	4-54
4.3.7 Route Variations.....	4-56
4.3.7.1 Montana.....	4-57
4.3.7.2 South Dakota	4-58
4.3.7.3 Minor Realignments Negotiated with Landowners	4-59
4.3.8 Agency-Preferred Route.....	4-59
4.4 Alternative Pipeline Design.....	4-59
4.4.1 Aboveground Pipeline	4-59
4.4.2 Smaller Diameter Pipe	4-60
4.5 Alternative Sites for Aboveground Facilities	4-61
4.5.1 Alternative Pump Station Sites	4-61
4.5.2 Alternative MLV Sites	4-61
4.5.3 Alternative Tank Farm Sites	4-61
4.6 References	4-62

LIST OF APPENDICES

- A Keystone XL Assessment (EnSys Energy & Systems, Inc.)
- B Life Cycle Greenhouse Gas Emissions of Petroleum Products from WCSB Oil Sands Crudes Compared with Reference Crudes (ICF International)
- C PHMSA Special Conditions
- D Construction Techniques in the Sand Hills Region
- E Water Well Data
- F List of Preparers
- G Distribution List

TABLE OF CONTENTS (CONTINUED)

LIST OF TABLES

<u>Table</u>		<u>Page</u>
2.1-1	Miles of New Pipe by State	2-2
2.3.1-1	Pipe Design Parameters and Specification	2-10
3.3.1-1	Groundwater Quality of Select Subsurface Aquifers	3-5
3.3.1-2	Water-Bearing Zones Less Than 50 Feet below Ground Surface beneath the Proposed ROW for the Project	3-7
3.10.1-9	Minority and Low-Income Populations as Percentage of Total County Populations in Affected Counties in 4-Mile-Wide Analysis Area	3-26
3.10.1-10	Minority and Low-Income Populations as Percentage of Census Block Group Populations in 4-Mile-Wide Analysis Area	3-32
3.10.1-11	County-Level Minority Populations Meaningfully Greater than Corresponding States' Minority Population	3-40
3.10.1-12	Number of Minority and Low-Income Populations Exceeding 50% within Census Block Groups by County	3-43
3.10.1-13	Minority and Low-Income (Environmental Justice) Populations Exceeding 150% of State Levels	3-48
3.10.1-16	Location of Construction Facilities Relative to County Environmental Justice Statistics ...	3-55
3.10.1-17	Census Block Groups Completely Contained within 4-Mile-Wide Analysis Area	3-57
3.10.1-18	Designated HPSAs and MUA/Ps with Identified Minority and/or Low-Income Populations within Census Block Groups in Affected Counties along the Proposed Project Corridor ...	3-59
3.13.1-1	Nationwide Onshore and Offshore Hazardous Liquid Pipeline Systems, Annual Averages for Serious Incidents	3-88
3.13.1-2	Nationwide Onshore Hazardous Liquid Pipeline Systems, Annual Averages for Significant Incidents	3-89
3.13.1-3	Nationwide Onshore Hazardous Liquid Pipeline Systems, Causes of Significant Incidents (2008-2010)	3-90
3.13.4-1	Projected Significant Spill Incidents (>50 Barrels) per Year for the Proposed Project Pipeline	3-97
3.13.4-2	Projected Spill Occurrence for the Proposed Project over a 10-Year Interval	3-98
3.13.5-1	Constituents and Properties of Western Canadian Select Crude Oil	3-106
3.13.5-2	Constituents and Properties of Suncor Synthetic A Crude Oil	3-108
3.13.5-3	Comparison of Heavy Crude Properties	3-113
3.13.5-4	API Gravity and Total BTEX Content for Both Medium to Heavy WCSB Conventional (non-oil sands derived) and WCSB Oil Sands Derived Crude Oils	3-117
3.13.5-5	API Gravity and Total Sediment Content for Both Medium to Heavy WCSB Conventional (non-oil sands derived) and WCSB Oil Sands Derived Crude Oils	3-118
3.13.5-6	Response Time Requirements of 49 CFR 194.115 along the Proposed Pipeline	3-129
3.13.5-7	Acute Toxicity of Aromatic Hydrocarbons to Freshwater Organisms	3-136

TABLE OF CONTENTS (CONTINUED)

LIST OF TABLES (CONTINUED)

<u>Table</u>		<u>Page</u>
3.13.5-8	Acute Toxicity of Crude Oil Hydrocarbons to <i>Daphnia magna</i>	3-137
3.13.5-9	Chronic Toxicity of Benzene to Freshwater Biota	3-137
3.13.5-10	Typical Ranges of Potential Crude Oil Spill Environmental Impacts	3-139
3.14.2-1	Representative Projects Considered in the Cumulative Impacts Assessment	3-163
3.14.3-3	PADD II Refinery Crude Capacity: 2008	3-174
3.14.3-4	PADD III Refinery Crude Capacity: 2008	3-175
3.14.3-5	Potential PADD III Refinery Operations in 2020 and 2030.....	3-178
3.14.3-6	2008-2009 Crude Oil Imports with Average Sulfur Content above 2.5% at PADD III Refineries That Would Have Direct Pipeline Access to Proposed Project	3-179
3.14.3-7	API Gravity and Total BTEX Content for a Variety of Crude Oils Produced in the World and Currently Refined in PADD III	3-179
3.14.3-8	Net Emissions for the Motiva Refinery Expansion ^a	3-182
3.14.3-9	Primary and Additional Studies Evaluated ^a	3-190
3.14.3-10	Summary of Key Study Design Features that Influence GHG Results	3-193
3.14.3-11	GHG Emissions for Producing Gasoline from Different Crude Sources from NETL 2009 and Estimates of the Impact of Key Assumptions on the Oil Sands-U.S. Average Differential	3-194
3.14.4-1	Endangered Species Act (U.S.) and Species at Risk Act (Canada) Species That Occur in Both the U.S. and Canadian Regions of the Proposed Keystone XL Project	3-206
4.1-1	Comparison of Key Impacts of the Proposed Project and the No Action Alternative	4-3
4.2.3-1	Reported Incident Rates for Alternative Methods of Liquids Transport.....	4-28
4.3.3-1	Impact Comparisons for the Steele City Segment Alternatives	4-38
4.3.3-2	Impact Comparisons of the I-90 Corridor Alternatives and the Associated Segment of the Route	4-49
4.3.3-3	Impact Comparisons for the Baker Alternative and the Associated Segment of the Proposed Route	4-51
4.3.4-1	Impact Comparisons for the Proposed Route and the Western Alternative	4-52
4.3.5-1	Impact Comparisons for the Gulf Coast Segment Alternatives	4-54
4.3.6-1	Impact Comparisons for the Houston Lateral Alternatives	4-56
4.3.7-1	Comparison of Niemi Route Variation with the Segment of the Route it Would Replace ..	4-58

TABLE OF CONTENTS (CONTINUED)

LIST OF FIGURES

Figure

- 2.2.6-1 Cushing Tank Farm Proposed Plot Plan
- 2.5.3-1 Planned Bakken Marketlink Facilities near Baker, Montana
- 2.5.3-2 Plot Plan for Planned Bakken Marketlink Facilities near Baker, Montana
- 2.5.3-3 Planned Bakken Marketlink Facilities at Proposed Cushing Tank Farm
- 2.5.3-4 Cushing Tank Farm Proposed Plot Plan
- 3.2.1-1 Sand Hills Topographic Region
- 3.3.1-1 Key Aquifers and Potable Water Wells within 2-mile Corridor (Montana)
- 3.3.1-2 Key Aquifers and Potable Water Wells within 2-mile Corridor (South Dakota)
- 3.3.1-3 Key Aquifers and Potable Water Wells within 2-mile Corridor (Nebraska)
- 3.3.1-4 Key Aquifers and Potable Water Wells within 2-mile Corridor (Oklahoma)
- 3.3.1-5 Key Aquifers and Potable Water Wells within 2-mile Corridor (Texas)
- 3.3.1-6 Northern High Plains Aquifer System Hydrogeologic Units
- 3.10.1-1 Environmental Justice (Montana)
- 3.10.1-2 Environmental Justice (South Dakota)
- 3.10.1-3 Environmental Justice (Nebraska)
- 3.10.1-4 Environmental Justice (Kansas)
- 3.10.1-5 Environmental Justice (Oklahoma)
- 3.10.1-6 Environmental Justice (Texas)
- 3.10.1-7 Environmental Justice Analysis - HPSA and MUA Locations (Montana)
- 3.10.1-8 Environmental Justice Analysis - HPSA and MUA Locations (South Dakota)
- 3.10.1-9 Environmental Justice - HPSA and MUA Locations (Nebraska)
- 3.10.1-10 Environmental Justice - HPSA and MUP Locations (Kansas)
- 3.10.1-11 Environmental Justice - HPSA and MUA Locations (Oklahoma)
- 3.10.1-12 Environmental Justice - HPSA and MUA Locations (Texas)
- 3.10.1-13 Environmental Justice - HPSA and MUA/P Locations (Harris County, Texas)
- 3.14.3-1 Comparison of the Percent Differential for WTW GHGs from Gasoline Produced from Canadian Oil Sands Relative to Reference Crudes
- 3.14.3-2 Comparison of the Percent Differential for WTT GHGs from Gasoline Produced from Canadian Oil Sands Relative to Reference Crudes
- 3.14.3-3 Percent Change in WTW Weighted-Average GHG Emissions from WCSB Oil Sands Crudes Relative to Reference Crudes
- 4.1.2-1 Proposed Enbridge Northern Gateway Project and Planned Trans Mountain Pipeline Expansions
- 4.3.2-1 Major Existing Pipelines Overlying Northern High Plains Aquifer System

TABLE OF CONTENTS (CONTINUED)

LIST OF FIGURES (CONTINUED)

Figure

- 4.3.3-1 Steele City Segment Alternatives
- 4.3.3-2 Alternatives Associated with Northern High Plains Aquifer System
- 4.3.3-3 Keystone Corridor Alternative Key Aquifers and Potable Water Wells within 2-mile Corridor
- 4.3.3-4 I-90 Corridor Alternatives
- 4.3.3-5 I-90 Corridor Alternatives Lake Francis Case Area
- 4.3.3-6 I-90 Corridor Alternatives Key Aquifers and Potable Water Wells within 2-mile Corridor
- 4.3.3-7 Baker Alternative
- 4.3.5-1 Gulf Coast Segment Alternatives
- 4.3.6-1 Houston Lateral Alternatives
- 4.3.7-1 Niemi Variation

TABLE OF CONTENTS (CONTINUED)

ABBREVIATIONS AND ACRONYMS

°C	degrees Celsius
°F	degrees Fahrenheit
µg/m ³	micrograms per cubic meter
µS/cm	microSiemens per centimeter; a measure of conductivity
AC	alternate current
ACHP	Advisory Council on Historic Preservation
AEO	Annual Energy Outlook
AEUB	Alberta Energy and Utilities Board
AGS	Armor grip suspension
AIRFA	American Indian Religious Freedom Act of 1978
alkanes	hydrocarbon chains
Al-Pac FMA	Alberta-Pacific Forest Industries Forest Management Agreement Area
AMOP	Arctic and Marine Oilspill Program
amsl	above mean sea level
ANSI	American National Standards Institute
AOPL	Association of Oil Pipelines
APC	area of probable concern
APE	area of potential effects
APHIS	Animal and Plant Health Inspection Service
API	American Petroleum Institute
APLIC	Avian Power Line Interaction Committee
AQCR	Air Quality Control Regions
ARG	American Resources Group, Ltd.
ARM	Administrative Rules Montana
aromatics	hydrocarbons with unsaturated carbon rings
ARPA	Archeological Resources Protection Act
ASME	American Society of Mechanical Engineers
ASRD	Alberta Sustainable Resource Development
ASTM	American Society for Testing and Materials
BACT	best available control technology
bbl	barrel
bbl/d	barrels per day
BEPC	Basin Electric Power Cooperative
bgs	below ground surface

TABLE OF CONTENTS (CONTINUED)

ABBREVIATIONS AND ACRONYMS (CONTINUED)

BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BMPs	best management practices
BNSF	Burlington Northern and Santa Fe railroad
bpd	barrels per day
BS&W	basic sediment and water content
BTEX	benzene, toluene, ethylbenzene, and xylenes
C&SD	Conservation and Survey Division
C ₆ H ₆	Benzene
CAA	Clean Air Act
CAFE	Corporate Average Fuel Economy
CAPP	Canadian Association of Petroleum Producers
CC	contractors camp
CCS	carbon capture and storage
CCS	cyclic steam stimulation
CCSP	U.S. Climate Change Science Program
CEAA	Canadian Environmental Assessment Act
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Restoration Compensation and Liability Act
CFR	Code of Federal Regulations
CH ₄	methane
CIA	Central Intelligence Agency
CMR plan	Construction, Mitigation, and Reclamation plan
CNRL	Canadian Natural Resources Limited
Cl ₂	chlorine
CND	Canada to North Dakota alternative
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ -e	CO ₂ -equivalent values
CP	cathodic protection
CREP	Conservation Reserve Enhancement Program
CRA	corrosion-resistant alloy
CRP	Conservation Reserve Program
CSA	Canadian Standards Association

TABLE OF CONTENTS (CONTINUED)

ABBREVIATIONS AND ACRONYMS (CONTINUED)

CSD	Canada to South Dakota alternative
CWA	Clean Water Act
CWS	Canadian Wildlife Service
CY	construction camp
Cycloalkanes	hydrocarbons containing saturated carbon rings
CZMA	Coastal Zone Management Act of 1972
DARP	Damage Assessment and Restoration Plans
dBA	decibels on the A-weighted scale
DC	direct current
DEIS	Draft Environmental Impact Statement
DEQ	Department of Environmental Quality
dilbit	bitumen mixed with a diluent
dilsynbit	a combination of bitumen and heavy conventional crudes blended with condensate and synthetic crude oil
DNRC	Department of Natural Resources and Conservation
DO	dissolved oxygen
DOE	Department of Energy
DOS	Department of State
DPHHS	Department of Public Health and Human Services
EA	Environmental Analysis
Eds.	editors
EFH	essential fish habitat
EIA	Energy Information Administration
EIS	Environmental Impact Statement
EJ	environmental justice
EMF	electromagnetic field
EnSys	EnSys Energy and Systems, Inc.
EO	Executive Order
EOC	Emergency Operations Center
EPA	Environmental Protection Agency
ERCB	Energy Resources Conservation Board
ERP	Emergency Response Plan
ERS	U.S. Department of Agriculture, Economic Research Service
ESA	Endangered Species Act
ESRI	Environmental Systems Research Institute

TABLE OF CONTENTS (CONTINUED)

ABBREVIATIONS AND ACRONYMS (CONTINUED)

ETP	Energy Technology Perspective
FBE	fusion-bonded epoxy
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FHA	Federal Highway Administration
FLPMA	Federal Land Policy and Management Act
FR	Federal Register
FRP	Facility Response Plan
ft	feet
ft/d	Feet per day
fungible	freely exchangeable
FWCA	Fish and Wildlife Coordination Act
gal	gallons
gal/min	gallons per minute
GAP	National Gap Analysis Program
GCS	Gulf Coast Segment
GEP	good engineering practice
GHG	greenhouse gas(es)
GIS	Geographic Information System
GLO	General Land Office
GMAW	gas metal; arc welding
GPA	Game Production Area
gpm	gallons per minute
H ₂	hydrogen gas
H ₂ S	hydrogen sulfide
H ₂ SO ₄	sulfuric acid
HAP	hazardous air pollutant
HAZWOPER	Hazardous Waste Operations and Emergency Response
HCA	high consequence area
HDD	horizontal directional drill
HFC	hydrofluorocarbons
HFE	hydrofluorinated ethers
HL	Houston Lateral

TABLE OF CONTENTS (CONTINUED)

ABBREVIATIONS AND ACRONYMS (CONTINUED)

HSI	Habitat Suitability Index
HPRCC	High Plains Regional Climate Center
HPV	High Production Volume
IBA	Important Bird Area
ICF	ICF International (subcontractor to Cardno ENTRIX)
ICS	Incident Command System
IEA	International Energy Agency
IFR	internal floating roof
IGCC	integrated gasification combined cycle
IMP	integrity management plan
INGAA	Interstate Natural Gas Association of America
IOSC	International Oil Spill Conference
IPCC	Intergovernmental Panel on Climate Change
IPL	Institute of Public Law
KDHE	Kansas Department of Health and Environment
Keystone	TransCanada Keystone Pipeline, LP
Keystone Marketlink	Keystone Marketlink LLC
kg/m ³	kilogram / (meter ³) = kg / m ³
KGS	Kansas Geological Survey
kPa	kilopascal
KPOR	Kansas Department of Revenue
KSDA	Kansas Department of Agriculture
Ksi	pounds per square inch
kV	kilovolt
LC ₅₀	the concentration of a compound necessary to cause 50 percent mortality in laboratory test organisms
LCA	life-cycle assessment
LCFS	low carbon fuel standards
Ldn	day-night sound level
LEPC	Local Emergency Planning Committee
LNG	liquefied natural gas
LPG	liquid propane gas
LULC	land use and land cover
MACT	Maximum Achievable Control Technology

TABLE OF CONTENTS (CONTINUED)

ABBREVIATIONS AND ACRONYMS (CONTINUED)

MAOP	maximum allowable operating pressure
mbd	million barrels per day
MBCA	Migratory Bird Convention Act
MBTA	Migratory Bird Treaty Act
MCA	Montana Code Annotated
MDEQ	Montana Department of Environmental Quality
MEPA	Montana Environmental Policy Act
MFSA	Major Facilities Siting Act
MFWP	Montana Fish, Wildlife, and Parks
mg/l	milligrams per liter
MGWPCS	Montana Ground Water Pollution Control System
MLA	Mineral Leasing Act
MLV	mainline valve
MMS	Minerals Management Service
MMTCO ₂ e	million metric tons of CO ₂ equivalent
MNHP	Montana Natural Heritage Program
MOP	Maximum Operating Pressure
MOU	Memorandum of Understanding
MP	milepost
MPDES	Montana Pollutant Discharge Elimination System
MSGWG	Montana Sage Grouse Work Group
MUID	Map Unit Identification
MVA	million volt amperes
mya	million years ago
N ₂ O	nitrous oxide
NA	not applicable
NAAQS	National Ambient Air Quality Standards
NAC	Nebraska Administrative Code
NACE	National Association of Corrosion Engineers
NAGPRA	Native America Graves Protection and Repatriation Act
NASS	National Agricultural Statistical Service
NAUS	National Atlas of the United States
NDA	Nebraska Department of Agriculture
NH ₃	ammonia

TABLE OF CONTENTS (CONTINUED)

ABBREVIATIONS AND ACRONYMS (CONTINUED)

NHD	National Hydrography Dataset
NDT	non-destructive testing
NEAAQS	Nebraska Ambient Air Quality Standards
NEB	National Energy Board (Canada)
NEBA	National Energy Board Act (Canada)
NEDEQ or NDEQ	Nebraska Department of Environmental Quality
NEDNR	Nebraska Department of Natural Resources
NEPA	National Environmental Policy Act
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NETL	National Energy Technology Laboratory
NF ₃	nitrogen trifluoride
NFIP	National Flood Insurance Program
NGO	non-governmental organization
NGPC	Nebraska Game and Parks Commission
NGPD	Nebraska Game and Parks Department
NHP	Natural Heritage Program
NHPA	National Historic Preservation Act of 1986
NHPAQ	Northern High Plains Aquifer
NID	National Interest Determination
NLAA	may affect, not likely to adversely affect species
NLCD	National Land Cover Database
NMFS	National Marine Fisheries Service
NNSR	Nonattainment New Source Review
NO ₂	nitrogen dioxide
NOA	Notice of Availability
NOAA	National Oceanic and Atmospheric Association
NOGCC	Nebraska Gas and Oil Conservation Commission
NOI	Notice of Intent
NO _X	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NPMS	National Pipeline Mapping System
NPS	National Park Service
NRC	National Response Center
NRCS	Natural Resources Conservation Service

TABLE OF CONTENTS (CONTINUED)

ABBREVIATIONS AND ACRONYMS (CONTINUED)

NRD	Natural Resources District
NRDA	Natural Resource Damage Assessments
NRHP	National Register of Historic Places
NRI	National Rivers Inventory
NS	effects not significant
NSA	noise sensitive areas
NSPS	New Source Performance Standards
NSR	New Source Review
NVCS	National Vegetation Classification System
NWI	National Wetland Inventory
NWP	nationwide permits
NWR	National Wildlife Refuge
NWSRS	Nebraska Wild and Scenic River System
O ₂	oxygen gas
O ₃	ozone
OAFF	Oklahoma Agriculture Food and Forestry
OCC	Operations Control Center
ODWC	Oklahoma Department of Wildlife Conservation
ONHI	Oklahoma Natural Heritage Inventory
OPA	Oil Pollution Act of 1990
OPEC	Organization of the Petroleum Exporting Countries
OPS	Office of Pipeline Safety
OSHA	Occupational Safety and Health Administration
PA	Programmatic Agreement
PADD	Petroleum Administration for Defense District
PAH	polycyclic aromatic hydrocarbons
PCIC	proposed Project cumulative impact corridor
PEM	palustrine emergent wetland
PENGASSAN	Petroleum and Natural Gas Senior Staff Association of Nigeria
PFC	perfluorocarbons
PFO	palustrine forested wetland
PFYC	Potential Fossil Yield Classification
PHMSA	Pipeline Hazardous Material Safety Administration
PIP	Preliminary Information Package

TABLE OF CONTENTS (CONTINUED)

ABBREVIATIONS AND ACRONYMS (CONTINUED)

PM	particulate matter
PMP	Pipeline Maintenance Program
PMPL	Portland-Montreal Pipe Line
POD	Plan of Development
POTW	publically owned treatment works
ppb	parts per billion
PPE	personnel protective equipment
ppm	parts per million
ppmw	parts per million by weight
PPTS	Pipeline Performance Tracking System
Project	Keystone XL Project
PRP	potentially responsible parties
PSCW	Public Service Commission of Wisconsin
PSD	prevention of significant deterioration
psi	pounds per square inch
psia	pounds per square inch absolute
psig	pounds per square inch gauge
PSS	palustrine scrub shrub wetland
ptb	pounds per thousand barrels
PWMB	Piney Woods Mitigation Bank
PWS	Public Water and Sewer
PY	pipe yard
QI	Qualified Individual
Reclamation	Bureau of Reclamation
RFI	radio frequency interference
RMPs	Resource Management Plans
ROW	right-of-way
RP	recommended practice
RRS/PY	railroad siding facility
RSA	regional study area
RUS	Rural Utilities Service
RWBC	Rainwater Basin Complex
SAL	State Archaeological Landmark
SARC	State Archaeological Research Center

TABLE OF CONTENTS (CONTINUED)

ABBREVIATIONS AND ACRONYMS (CONTINUED)

SCADA	Supervisory Control and Data Acquisition
SAGD	steam-assisted gravity drainage
SARA	Species at Risk Act
SCO	synthetic crude oil
SCS	Steele City Segment
SDCL	South Dakota Common Law
SDCWCS	South Dakota Comprehensive Wildlife Conservation Service
SDDNR	South Dakota Department of Environment and Natural Resources
SDGFP	South Dakota Game, Fish, and Parks
SDNHD	South Dakota Natural Heritage Database
SDPUC	South Dakota Public Utilities Commission
SDEIS	Supplemental Draft Environmental Impact Statement
SDGS	South Dakota Geological Survey
SF ₆	sulfur hexafluoride
SGSK	State Geological Survey of Kansas
SHPO	State Historic Preservation Office(er)
SIP	State Implementation Plan
SMAW	Manual- shielded metal arc welding
SMYS	specified minimum yield strength
SO ₂	sulfur dioxide
SPAF	Special Permit Analysis and Findings
SPCC	Spill Prevention, Control, and Countermeasure
SSM	startup, shutdown, and maintenance
SSURGO	Soil Survey Geographic database
synbit	a combination of bitumen and synthetic crude oil
syncrude	synthetic crude oil
SWCA	SWCA Environmental Consultants
SWPA	Source Water Protection Area
SWPPP	Stormwater Pollution Prevention Plan
TAN	total acid number
TARL	Texas Archaeological Research Laboratory
TBD	To Be Determined
TCEQ	Texas Commission on Environmental Quality
TCP	traditional cultural properties

TABLE OF CONTENTS (CONTINUED)

ABBREVIATIONS AND ACRONYMS (CONTINUED)

TDS	total dissolved solids
TERP	Texas Emissions Reduction Plan
THC	Texas Historical Commission
THPO	Tribal Historic Preservation Officer
TMDL	total maximum daily load
TNC	transient non-community
TOPS	Texas Offshore Port System
TPWD	Texas Parks and Wildlife Department
tpy	tons per year
TransCanada	TransCanada Pipelines Ltd.
TRB	Transportation Research Board
TSS	total suspended solids
TWAs	temporary workspace areas
TxLED	Texas Low Emission Diesel
TXNDD	Texas Natural Diversity Database
UPS	uninterrupted power supply
US	United States
USA	unusually sensitive area
USACE	US Army Corps of Engineers
USC	United States Code
USCG	US Coast Guard
USDA	US Department of Agriculture
USDA SCS	US Department of Agriculture-Soil Conservation Service
USDOT	US Department of Transportation
USEPA	US Environmental Protection Agency
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey
VEC	valued ecosystem component
VOC	volatile organic compound
VOL	volatile organic liquid
VRM	visual resource management
WCI	Western Climate Initiative
WCS	Western Canadian Select
WCSB	Western Canadian Sedimentary Basin

TABLE OF CONTENTS (CONTINUED)

ABBREVIATIONS AND ACRONYMS (CONTINUED)

Western	Western Area Power Administration
WHPA	wellhead protection areas
WHMA	wildlife habitat management area
WMA	wildlife management area
WORLD	World Oil Refining Logistics & Demand model
WRCC	Western Regional Climate Center
WRP	Wetland Reserve Program
WRPA	water resource protection areas
WSA	wilderness study area
WTI	West Texas Intermediate crude oil
WTT	well-to-tank
WTW	well-to-wheels

TABLE OF CONTENTS (CONTINUED)

ABBREVIATIONS AND ACRONYMS (CONTINUED)

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